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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,866	07/22/2003	Yoshihiro Kato	010986.52582US	6399

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EXAMINER	
LUND, JEFFRIE ROBERT	
ART UNIT	**PAPER NUMBER**
1763	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,866	KATO ET AL.	
	Examiner	Art Unit	
	Jeffrie R. Lund	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7,8,10-12 and 20-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7,8,10-12 and 20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-8, and 10-12, in the reply filed on October 24, 2005 is acknowledged.

Priority

2. The present application is a continuation-in-part of PCT/JP02/00429 filed January 22, 2002 and claimed priority to Japanese Patent Application 2001-14011 filed January 23, 2001. Since the parent application is not available to the Examiner to determine what matter was added as part of the continuation, the Examiner has reviewed the application assuming a priority date of July 22, 2003.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 10, and 20 are rejected under 35 U.S.C. 102(b) as being anticipate by Dhindsa et al, US Patent 6,245,192 B1.

Dhindsa et al teaches a processing system that includes: a chamber; a gas supply plate 26, which has a plurality of gas holes 54, and supplies a process gas into said chamber through the gas holes; a first diffusion portion which diffuses the gas parallel (horizontal) to a major surface and includes a plurality of linear grooves 70 or 74 formed in one side of a disk-like member 56A or 56B which are in communication with

each other and include through holes; a second diffusion portion which leads gas diffused by the first diffusion portion to the gas holes and includes a grove 88 in one side of a disk-like member which forms a hollow portion, can be formed on a single disk-like member with the first diffusion portion (see disk 56B), and includes a partition member 86 which separates the hollow portion into a plurality of areas, including a center and end areas. The gas flows in mutually independent gas flow paths to the center or end areas and the flow rates can be independently controlled. The gas can be supplied from a single source. (Entire document, specifically, figures 4-6)

5. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipate by Fujikawa et al, US Patent 5,595,606.

Fujikawa et al teaches a processing system that includes: a chamber 26; a gas supply plate 62, which has a plurality of gas holes 78, and supplies a process gas into said chamber through the gas holes; a first diffusion portion 52, 54 which diffuses the gas parallel (horizontal) to a major surface; and a second diffusion portion 80, 82, 52 which leads gas diffused by the first diffusion portion to the chamber. The first diffusion portion and said second diffusion portion comprise mutually independent gas flow passages, and at least one gas flow passage supplies said process gas into a center area of the chamber; at least one gas flow passage supplies said process gas into an end area of said chamber; and wherein the process gas in a first independent gas flow passage and the process gas in a second independent gas flow passage do not mix before flowing into said chamber. (Figure 1)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 7, 8, 11, 12, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dhindsa et al, US Patent 6,245,192 B1, in view of Fujikawa et al, US Patent 5,595,606.

Dhindsa et al was discussed above.

Dhindsa et al differs from the present invention in that Dhindsa et al does not teach that the first diffusion portion is a plurality of linear holes formed by boring and sealing the end portion of each hole, or not mixing the process gases before flowing into the chamber.

Fujikawa et al was discussed above and teaches that the linear holes are made

by boring the linear holes and sealing the ends of the holes (column 6 lines 47-55); and the process gas in a first independent gas flow passage and the process gas in a second independent gas flow passage do not mix before flowing into said chamber.

The motivation for making the linear grooves of Dhindsa et al linear holes is to provide an alternate means of making the apparatus of Dhindsa et al. Furthermore, the linear holes do not require a second sealing plate, which makes the apparatus easier to assemble and maintain.

The motivation for replacing the gas flow pattern of Dhindsa et al with the gas flow pattern of Fujikawa et al is to prevent the first and second gases from mixing prior to the chamber, thus preventing premature reaction of the processing gases and clogging of the gas supply passages as taught by Fujikawa et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the linear grooves and replace the flow pattern of Dhindsa et al to linear holes with a flow pattern that does not mix the process gases before they flow into the chamber as taught by Fujikawa et al.

Response to Arguments

9. Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive.

In regard to the argument that the apparatus Dhindsa et al teaches that "gas from both the first and second gas supplies mixes in the channels 88 in the underside of the lower baffle plate above the top surface of the showerhead", the Examiner agrees. However, claim 1 does not limit the mixing of the gases. Claim 1 only requires that at

least one gas flow passage supplies the gas to the center and end areas. Dhindsa et al teaches multiple gas flow passages independently supplying two types of gas to the center and end areas. Therefore, Dhindsa et al meets the claimed limitation of at least one gas flow passage supplies said gas via through holes to said center or end areas.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention. The cited art contains patents that could be used to reject the claims under 35 USC § 102 or 103. These rejections have not been made because they do not provide any additional or different teachings, and if they were applied, would have resulted in an undue multiplication or references. (See MPEP 707.07(g))

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

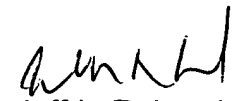
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
1/5/06